

Application No.: 10/069,827

Docket No.: HO-P02378US0

CERTIFICATE OF ELECTRONIC TRANSMISSION 37 C.F.R. § 1.8	
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<u>September 3, 2009</u> Date	Electronic signature: / Melissa L. Sistrunk / Melissa L. Sistrunk (Reg. No. 45,579)

Docket No.: HO-P02378US0

(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Helene Derand et al.

Confirmation No.: 5350

Application No.: 10/069,827

Art Unit: 1753

Filed: December 11, 2000

Examiner: Barton, Jeffrey Thomas

For: MICROFLUIDIC SURFACES

RESPONSE TO NOTIFICATION OF NON-COMPLIANT APPEAL BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This submission is filed in response to the Notification of Non-Compliant Appeal Brief dated August 3, 2009 ("Notification") and the corresponding Order Returning Undocketed Appeal to Examiner dated July 24, 2009 ("Order"). As is stated both in the Notification and the Order, Appellants need only submit the defective section of the Brief.

In particular, the Brief was considered defective because it failed to address claim 30 in the "Summary of Claimed Subject Matter." Appellants provide this revised section of the Brief herein.

Applicants believe that no fees are required for this submission, as the fees required under § 41.20(b)(2) have been previously paid. However, if any fees are due, please charge the

following account, from which the undersigned is authorized to pay: Deposit Account 06-2375 under Order Number HO-P02378US0.

V. SUMMARY OF CLAIMED SUBJECT MATTER

References to the specification refer to the originally filed specification for the independent claims and the separately argued dependent claims, per 37 CFR § 41.37(c)(v). However, Appellants assert that there are no 35 USC § 112, sixth paragraph limitations in the claims.

Claim 7 concerns a microfluidic device being in a dry state that is capable of being rehydrated (claim 11, lines 2-3), said device comprises a set of one or more covered microchannel structures manufactured in the surface of a planar substrate (Abstract, lines 1-2), wherein each microchannel structures comprises: a) more than one functional part wherein at least one of said functional parts is selected from the group consisting of a volume defining unit, a mixing cavity, and a waste cavity (page 12, lines 27-34) b) wherein reduced non-specific adsorption and hydrophilicity have been optimized (page 6, lines 1-3) by a coating exposing a non-ionic hydrophilic polymer on the surface of at least one of said at least one functional parts (page 10, line 24 –page 11, line 1) such that an aqueous liquid is capable of entering the functional part by self-suction when the liquid has passed the entrance of the functional part (page 14, lines 20-24); and c) wherein the device is adapted for mass transport of solutes and/or particles between different functional parts of each microchannel structure by a liquid flow caused by non-electrokinetic forces (page 13, lines 4-18).

In claim 14, the non-ionic hydrophilic polymer is a reaction product between ethylene oxide and a dihydroxy or a polyhydroxy compound (page 8, lines 8-11).

In claim 15, the non-ionic hydrophilic polymer comprises one or more blocks of polyoxyethylene chains (original claim 5, line 3).

In claim 16, the non-ionic hydrophilic polymer is polyethylene glycol (page 7, lines 7-8).

In claim 17, the non-ionic hydrophilic polymer is polyethylene glycol which has a methoxy group at the end which does not bind to the part surface (page 7, lines 15-18).

In claim 24, the skeleton is a polyamine (page 9, line 15).

In claim 25, the skeleton is a polyethylene imine (page 9, lines 18-20).

In claim 26, the skeleton has a molecular weight 10,000-3,000,000 dalton (page 9, line 30).

In claim 27, the surface of the planar substrate without the coat is made of plastics (page 1, lines 27-28) and the part surface without coat is hydrophilized by plasma treatment or by an oxidation agent in order to introduce functional groups that allow for a subsequent attachment of the coat onto the part surface (claim 4, lines 2-6).

Claim 30 concerns a method of performing an analytical assay in a microchannel structure (page 16, line 31- page 17, line 20) of the microfluidic device of claim 7 (described in the paragraph above) comprising the steps of (a) preparing a sample (page 17, line 3); (b) transporting an analyte and reagents between different function parts of the microchannel structure (page 5, lines 28-30) by a liquid flow caused by non-electrokinetic forces and running the assay reaction within the device (page 13, lines 4-13); and (c) detecting within the device the result of the assay reaction (page 13, line 22), wherein the result is a measure of an activity and/or a quantitative presence of an analyte in the sample (page 17, lines 22-25).

In claim 42, the surface carrying the coat is made of inorganic material (page 1, lines 27-28).

In claim 43, the polymer skeleton is an inorganic polymer (page 9, lines 8-9).

In claim 45, the cycloalkene is norbornene or substituted norbornene (page 16, lines 19-23).

Application No.: 10/069,827

Docket No.: HO-P02378US0

REMARKS

Appellants assert that the Brief is now in compliance.

Dated: September 3, 2009

Respectfully submitted,

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